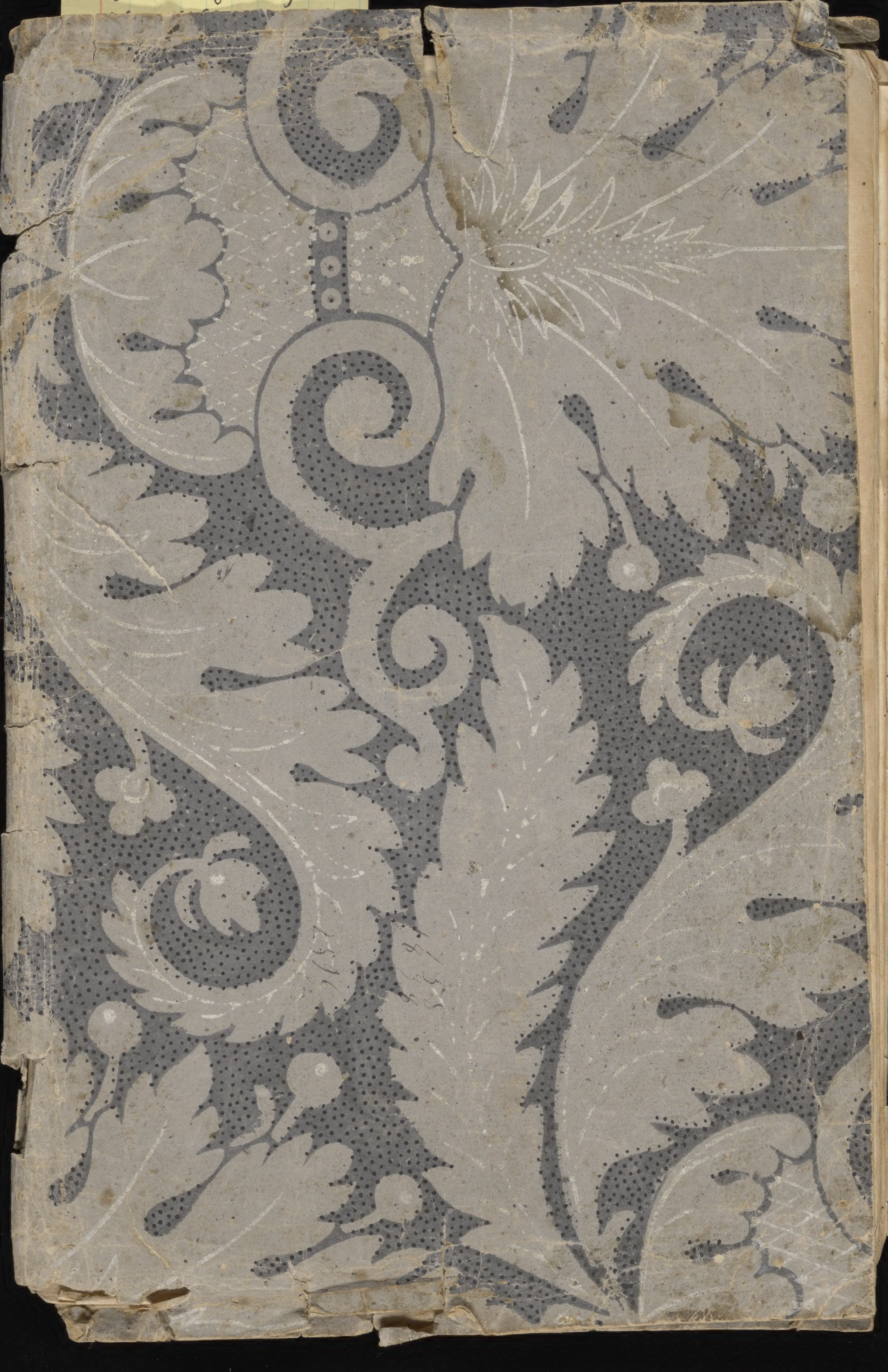
SchooL BOOK
LUCRETIA GOODRIDGE



155
1838
2596

LUCRETIA GOODRIDGE
LYNN MASS 1819

$35 +5
103 801

Continued.

4th What is the third part of 3669? 1223 Answer

3)3669
1223

5th What is the fourth part of 87856? 21964 Answer

4)87856
21964

What is the twent fourth part of 2688? 112 Answer

24)2688(112
24
28
24
48
48

What is the half of 98570? 49285 Answer

2)98570
49285

What is hundred and fiftieth part of 2550 17 Answer

150)2550(17
15
105
105

Lucretia Goodridge Lynn

4

Practical Questions

An Gentleman bought 387 acres of land for wich he gave 8514 dollars. What did it cost per acre? 22 dd. Answer

387) 8514 (22
774
774
774

A gentleman dying left 16536 dollars to be divided in the following manner viz. — To his widow he gave one third part, and the remainder was to be divided equally among four children; what did each have?

5512 dol. widow portion
2756 dol. each childes portion Answer

3) 16536
5512
4) 11024
2756

* * *

Compound Addition.

Compound Addition teacheth to find the total sum of two or more numbe[rs] wich consist of several denominations. Rule 1st Each denomination must be Rule 1st placed directly under that wich of the same name; that is farthings mus[t] be placed under farthings pence under pence shillings under shillings, &c. Rule 2d Carry so many in every denomination is make one in the next higher denomination. Proof In order to prove any sum in Compound Addition proceed in the same maner as in Simple Addition. Before the learner begins to work questions in lawful money it wold be well to commit to memory the following Tables.

* * *

Lawful Money.

4 farthings	make	1 penny,	marked d.
12 pence		1 shilling,	s.
20 shillings		1 pound,	£.

Examples

£ s. d. q.
45 - 8 - 6 - 1
38 - 7 - 3 - 2
15 - 3 - 4 - 3
10 - 4 - 8 - 0
109 3 10 2
63 15 4 1
Proof 109 3 10 2

898 - 13 - 4 - 3
725 - 10 - 9 - 1
636 - 14 - 3 - 0
543 - 07 - 5 - 3
2804 - 5 - 10 - 3
1905 - 12 - 6 - 0
2804 - 5 - 10 - 3

Note. The most general method of expressing farthings is thus.

$\frac{1}{4}$ one farthing; or one fourth of a penny.
$\frac{1}{2}$ two farthing; or half a penny.
$\frac{3}{4}$ three farthing; or three fourths of a penny.

£ s. d.
856 - 3 - 4 1/2
580 - 9 - 8
771 - 11 - 3 1/4
317 - 8 - 6
2464 - 12 - 9 3/4
1609 - 9 - 5 1/4
2464 - 12 - 9 3/4

£ s d
300 — 17 — 9 3/4
173 — 14 — 8 1/2
446 — 11 — 7
950 — 13 — 4 1/4
1871 — 17 5 1/2
1570 — 19 — 7 3/4
1871 — 17 — 5 1/2

£ s d
87 - 16 — 7 1/2
19 13 - 4 1/4
75 - 11 - 10
16 — 1 — 9 1/2
199 3 7 1/4
111 6 11 3/4
199 — 3 - 7 1/4

£ s d
8315 - 19 - 3 3/4
701 — 17 — 6 1/2
519 - 12 - 8 1/2
7310 — 13 — 4 1/4
17 — 10 — 5 3/4
16859 13 4 3/4
8542 14 1
6859 13 4 3/4

£ s d
418 — 11 — 10
510 — 14 — 9 1/2
10 — 4 — 11 3/4
3 — 17 3 1/4
2 — 9 2 1/2
951 18 0 1/2
533 6 2 1/2
951 18 0 1/2

£ s d
87 - 19 - 11 1/4
55 - 11 - 8
90 - 4 - 7 3/4
18 - 8 - 2 3/4
9 - 5 - 6 1/2
261 10 0 1/4
173 10 1
261 10 0 1/4

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Questions in Lawful Money

1 A man has four horses. The first is worth eighty four pounds fifteen shillings and six pence; the second is worth forty eightypounds thirteen shillings and four pence; the third is worth thirty one pounds six shillings and eight pence; the fourth is worth thirteen pounds, eight shillings and three pence; what are they all worth? £. 178 9 9 Ans.

£	s	d
84	15	6
48	13	4
31	6	8
13	8	3
178	9	9

A gentleman possesses land to the value of two thousand five hundred and ninety eight pounds, sixteen and teen pence; he has a ship worth two thousand, three hundred and nine pounds, six and eight pence; his notes are valued at eight hundred and twelve pounds eight hundred and nine pence half penny, he has cash to the amant of four hundred and eight pounds, twelve and a penny, three farthings; — what is the man worth? £ 6129 4 5¼ Ans.

£	s	d
2598	16	10
2309	6	8
812	8	9½
408	12	1¾
6129	4	5¼

Francis Gutridge. Lynn.
1840

Continued

3 Suppose I owe ~~to~~ one a man sixteen pounds three and four pence halfpenny; – to another twelve pounds one and six pence; to another, seven pounds eight and two pence one farthing; – to another, sixteen~~pence~~ shillings and eight pence what is the amount of all my debts?

£ 36 9 8¾ Answer.

£ s d
16 - 3 - 4 ½
12 - 1 - 6
7 - 8 - 2 ¼
16 - 8
36 9 8¾

4 A gentleman dyeing left three children to whom he bequeathed the following legacies viz to the second he gave five hundred and thirteen pounds fifteen and six pence; – to the third three hundred and twelve pounds, – eighteen and ten pence and to the first he gave a sum equal to both the others, what is the sum of all their ~~portion~~ portions?

£. 1653 8 8 Answer.

513 - 15 - 6
312 - 18 - 10
826 1 4 4
1653 8 8

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1819

Federal Money.

10 mills	make	1 cents	marked	ct.
10 cents	——	1 dimes,	——	dim.
10 dimes.	——	1 dollars	——	dol.
10 dollars	——	1 eagle,	——	E

Example

e dol dim ct m
36 - 8 - 5 - 7 - 9
15 - 9 - 8 - 6 - 4
86 - 5 - 4 - 3 - 2
54 - 8 - 9 - 8 - 5
194 - 2 - 8 - 5 4
157 - 4 - 2 - 8 - 1
194 - 2 8 - 5 4

e dol dim ct m
340 - 7 - 6 - 8 - 7
935 - 5 - 7 - 3 2
543 - 2 - 1 - 0 6
480 - 9 - 6 - 3 8
2310 5 - 1 - 6 - 3
1959 7 4 7 6
2310 5 1 6 3

dol ct m
345 - 26 - 6
715 - 50 - 7
980 - 75 - 5
253 - 60 - 0
2295 1 2 8
1949 8 6 2
2295 1 2 8

dol ct
85 - 05
17 - 16
95 - 83
12 - 33
210 37
125 32
210 37

dol ct m
55 - 87 - 3
28 - 08 - 0
17 - 40 - 5
38 - 05 - 0
1394 0 8
8953 5
1394 0 8

dol ct
384 - 50
576 - 09
399 - 95
800 - 08
2160 62
1776 12
2160 62

Mills are separated from cents and cents from dollars by a comma wich denotes that mills are tenth parts of a cent, and cents hundredth parts of a dollar.

Questions in Federal Money

1 One man is worth one thousand eight hundred and thirty six dollars fifty cents three mills. Another is worth fourth thousand three hundred and twelve dollars twenty fife cents seven mills Another is worth seven hundred and eighty dollors twenty cents Another is worth one hundred and eighty dollars, sixteen cents five mills What are they all worth?

dol. 7109. 12, 5 Answer

dol ct m
1836 - 50 - 3
4312 - 25 - 7
780 - 20
180 16 - 5
7109 12 5

2 A man has four notes specifing the following sums viz Eightynine dollars five cents. Sixty five dollars seven cents. Twenty five dollars ten cents. Four dollars six cents What is the sum of all the notes?

dol. 183. 28. Answer

dol ct
89 - 5
65 - 7
25 - 10
4 - 6
183 28

3 A merchant buys a bale of cloth for one hundred and nine dollars seventy five cents A quantity of salt for two hundred and fifty dollars eight cents A quantity of sugar for ninety five dollars thirty three cents thee mills A cargo of tar for two thousand five hundred and eleven dollars fifty cents A quantity of flour for two hundred and nine dollars twety five cents five mills. What did the above goods cost?

dol 3175. 91. 8 Ans

dl ct
109 - 75
250 - 08 m
95 - 33 - 3
2511 - 50
209 - 25 5
3175 91 8

Troy Weight

24 grains	make	1 penny weight	marked	pwt
20 penny wts	—	1 ounce	—	oz
12 ounces	—	1 pound	—	lb

385 - 8 - 9 - 16
137 - 4 - 11 - 8
496 - 3 - 10 12
856 - 6 - 7 9
1875 - 10 18 - 21
1490 2 - 9 5
1875 - 10 18 21

lb oz pwt gr
703 - 9 - 5 - 10
584 - 3 - 15 - 14
957 - 6 - 8 - 13
691 - 3 - 5 4
2776 10 14 - 17
2073 - 1 - 9 - - 7
2776 - 10 - 14 17

Avoirdupois Weight

16 drams	make	1 ounce	marked	oz
16 ounces	—	1 pound	—	lb.
28 pounds	—	1 quarter of an hundred wt.	—	qr.
4 quarters	—	1 hundred weight.	—	cwt.
28 hundred	—	1 ton	—	T.

T cwt qr lb oz gr
34 - 13 - 1 - 18 - 7 - 5
89 - 7 - 3 - 10 - 9 - 11
70 - 15 - 0 - 14 - 7 - 4
68 - 3 - 1 - 9 - 5 - 7
262 - 19 - 2 - 24 - 13 - 11
228 - 6 - 1 - 6 - 6 - 6
262 - 19 - 2 - 24 - 13 - 11

T cwt qr lb oz gr
84 - 11 - 2 - 16 - 8 - 10
47 - 9 - 2 - 12 - 8 - 6
56 - 10 - 1 - 20 - 5 - 9
98 - 5 - 0 - 3 - 6 2
286 - 16 - 2 - 24 - 12 - 11
202 5 0 0 8 14 1
286 - 16 - 2 - 24 12 - 11

Apothecaries' Weight

20 grains make 1 scruple marked ℈
3 scruples — 1 dram — ʒ
8 drams — 1 ounce — ℥
12 ounces — 1 pound — ℔

℔ ℥ ʒ ℈ gr
346-5-3-0-11
187-8-3-2-12
154-4-5 1 8
11 -2 1 5
1499-9-6-2-16
1153-4-3-2-5
1499-9-6-2-16

874-6-2-1,-12
735-7-2-1-10
574-5-6-2
297-3-0-0-15
2401 10-4-0-7
1567 4-1-0-15
2401-10-4-0-7

Cloth Measure.

4 nails make 1 quarter of a yard marked qr.
4 quarters — 1 yard — yd.
3 quarters — 1 Ell Flemish — E.Fl.
5 quarters — 1 Ell English — E.E.
6 quarters — 1 Ell French — E.Fr.

yd qr na
356 = 2 = 1
756 = 1 = 2
357 = 3 : 3
685 = 0 : 1
876 = 2 = 2
568 = 1 = 0
785 = 0 = 1
385 = 3 = 2
4029 = 1 = 1
385 = 3 = 2

E Fl qr na
84=1=3
75=2=1
85=0=2
57=1=1
89=2=3
78=1=0
57=0=2
525=1=1
440=2 1
525:1 0

E E qr na
95=3=1
76=4=3
38=2=1
75=0=2
50=3=0
68=1=3
77=1=2
483=0=0
437:1:3
485=0=0

E Fr qr na
56=5=3
86=4:2
78=3:0
95=2:1
23=0:2
78=3=3
84=4:1
504=0=0
447:0:1
504:0=0

Long Measure.

3 barley corns	make 1 inch	marked in.
12 inches	— 1 foot	— ft.
3 feet	— 1 yard	— yd.
5½ yard or 16½ f…	1 rod pole or perch	— rod.
40 rod	— 1 furlong	— fur.
8 furlong	1 mile	— mile.

mile fur rod yd ft in bar
68 = 5 = 30 = 4½ = 1 = 7 = 2
78 = 3 = 10 = 3 = 2 = 5 = 1
85 = 6 = 20 = 4 = 0 = 9 = 1
79 = 6 = 20 = 1½ = 1 = 4 = 1
312 = 6 = 2 = 4 0 = 2 2
244 = 0 = 11 = 4 = 1 = 7 0
312 = 6 = 2 4 = 0 = 2

86 = 6 = 25 = 3 = 0 = 8 = 1
57 = 2 = 15 = 2½ = 1 = 4 = 2
86 = 4 = 35 = 4 = 2 = 7 = 0
78 = 5 = 5 = 3½ 2 = 5 = 1
309 = 3 = 2 = 4 = 1 = 1 = 1
222 = 4 = 17 = 1 = 0 = 5 = 0
309 = 3 = 2 = 4 = 1 = 1 = 1

The Surveyor's Chain
is thus divided

$7\frac{92}{100}$ inches	make 1 links
25 links	— 1 pole or rod
100 links	— 1 chain
10 chains	1 furlong
8 furlong	1 mile

Square Measure

144 square inches make 1 square feet
— 9 — feet — 1 — yard
30¼ — yards — 1 — rod
160 — rods — 1 — acres

A rod yd ft in
346 = 90 = 25 = = 5 = 100
561 = 70 = 5¼ = 4 = 40
189 = 49 = 12 = 4 = 19
657 = 23 = 8 = 2 = 4
2350 73 = 21 = 7 = 19
2010 83 = 96 = 2 = 19
2350 = 73 21 = 7 = 19

A rod yd ft in
865 = 30 = 18 = 3 = 72
879 = 90 = 10 = [illegible] = 24
940 = 50 = 14 = 7 = 15
386 = 14 = 2¼ = 0 = 72
3065 = 25 = 15 = 8 = 40
2200 = 9 = 96 = 5 = 78
3065 = 25 = 15 = 8 = 72

Cubic or Solid Measure.

1728 cubic inches make 1 cubic foot
27 cubic feet — 1 cubic yard
40 feet of round timber or 50 feet of hewn timber 1 ton
128 solid feet that is 8 feet in length 4 in breadth and 4 in height — 1 cord of wood

yd ft in
742 = 10 = 1512
7[illegible] = 9 = 116
[illegible]
[illegible]
2307 = 25 = 1052
[illegible]
2307 = 23 [illegible]

5 = 15 = 169
91 = 7 = 379
49 = 14 = 401
29 = 6 = 184
257 = 13 11 2[illegible]
171 = 25 [illegible]
257 = 13 = 1164

yd ft in
17 12 = 74
11 = 11 = 74
35 = 14 = [illegible]
67 = 4 = 70
217 = 4 11 1
145 = 2 2 3
= 17 14 1 1

Wine Measure

4 gills make 1 pint [illegible]
2 [illegible] 1 quart
4 quarts — 1 gallon
63 gallons 1 hogshead

hhd gls pts gills
[illegible] = 40 = 3 = 1 = 2
[illegible] = 23 = 1 = 1 = 1
[illegible] 6 = 17 = 2 = 0 = 3
456 = 13 = 1 = 1 = 0
1[illegible] = 7 2 = 1 = 0 = 2
197[illegible] 4 = 1 = 1 = 0
1[illegible]28 = [illegible] = 2 = 1 = 0 = 2

hhd gls pts gal gill
174 = [illegible] = 2 = 1 = 3
517 = [illegible] = 3 = 0 = 2
785 = [illegible] = 1 = 1 = 1
953 = 10 = 0 = 0 = 1
2430 = 37 = 3 = 1 = 3
[illegible] = 6 = 1 = [illegible] =
24[illegible]0 = 39 = [illegible] = 1 = [illegible]

Ale or Beer Measure

2 pints make 1 quart
4 quarts — 1 gallon
54 gallons 1 hogshead

hhd gal qts pts
340 = 40 = 2 = 1
479 = 35 = 1 = 0
247 = 16 = 3 = 0
855 = 19 = 1 = 1
1922 [illegible] 7 [illegible] 0
1982 = 1 = 1 = 1
1922 = 27 = 0 = 0

hhd gal qts pts
1105 : 24 : 1 : 0
367 : 15 : 3 : 1
[illegible] : 18 : 1 : 1
[illegible] : 10 : 3 : 0
2478 : 11 : 2 : 0
1192 : 40 : 3 : [illegible]
2478 : [illegible] : [illegible] : 2

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Dry Measure

2 pints	make	1 quart,	marked	qts
2 quarts	—	1 pottle	—	pot
2 pottles		1 gallon		gal
2 gallon	—	1 peck		pk
4 peck	—	1 bushel		bush
36 bushels	—	1 chaldron		ch

ch bu pk gal pot qts pts
36 14 3 = 1 0 = 1 1
2[illegible] = 19 = 1 = 0 = 1 1 = 0
27 = 7 = 2 = 1 = 0 = 1 = 1
13 = 12 = 3 = 0 = 1 = 0 = 1
106 14 2 = 0 = 0 = 0 = 1
69 = 35 3 = 0 = 1 = 1 = 0
106 14 2 = 0 = 0 = 0 = 1

ch bush pk gal pot qts pts
14 = 21 = 2 = 0 = 1 = 0 = 1
17 = 15 = 1 = 1 = 0 = 0 = 0
24 = 9 = 3 = 1 = 1 = 1 = 1
19 = 5 = 0 = 1 = 1 = 1 = 0
75 = 16 = 0 = 1 = 0 = 1 = 1
50 = 30 = 2 = 0 = 1 = 1 = 1
75 = 15 = 0 = 1 = 0 = 0 = 0

Time.

60 seconds	make	1 minute	marked	m
60 minutes	—	1 hour	—	h
24 hours	—	1 day	—	d
7 days	—	1 week	—	w
4 weeks	—	1 month	—	mo
13 lunar months or 12 Solar months		1 year	—	yr

d h m s
3 = 16 = 45 = 15
5 = 1 = 10 = 20
6 = 4 = 4 = 25
4 = 13 = 15 = 45
19 = 14 = 16 = 45
15 = 21 = 31 = 30
1[illegible] = 14 = 16 = 45

w d h m
2 = 5 = 16 = 30
1 = 8 = 3 = 15
3 = 6 = 7 = 12
0 = 4 = 9 = 30
8 = 1 = 9 = 27
5 = 0 = 19 = 57
8 = 1 = 9 = 27

yr mo w d h m s
346 9 = 3 = 6 = 18 = 47 = 36
517 4 = 1 = 3 = 6 = 3 = 24
876 = 7 = 2 = 5 = 14 = 49 = 57
38 = 6 = 2 = 0 = 12 = 29 = 15
2119 = 2 = 2 = 2 = 2 = 2 = 2
1778 = 4 = 2 = 2 = 9 = [illegible] = 17
2119 2 = 2 = 2 = 2 = 2 = 1 = 2

Compound Substraction

Compound Substraction teacheth to find the difference between two sums of several denomination.

Rule 1st Place the two sums in such a marier as that each denomination may stand directly under that of that same name, the greather sum being above less. Substract the less sum from the greater begining with the lowest denomination and set down the differance

Rule 2d Borrow in all denomenations the same for wich you carried in Compound Addition

Lawful Money

	£	s	d	q
from	785	18	9	3
take	357	14	7	1
remain	428	4	2	2
proof	785	18	9	3

	£	s	d	q
borrowed	37	10	6	1
paid	13	14	9	3
remain	23	15	8	2
proof	37	10	6	1

Note In case of borowing you may substract the lower number from the number borrowed and to the differance add the upper number; wich is the same as adding the number borrowed to the upper number.

£	s	d	q
8316	9	3	0
1987	8	4	3
6329	0	10	1
[illegible]	[illegible]	[illegible]	0

£	s	d	q
5911	13	10	2
2598	17	11	3
3312	15	10	3
5911	13	10	2

£	s	d
8753	1	10 1/4
308	12	11 1/2
8444	8	10 3/4
8753	1	10 1/4

Compound Substraction

£ s d
89 = 11 = 3 1/4
33 = 13 = 4 1/2
55 = 17 = 10 3/4
89 = 11 = 3 1/4

835 = 12 = 4 1/2
516 = 16 = 2 3/4
318 = 16 = 1 3/4
835 = 12 = 4 1/2

£ s d
100 = 3 = 6
557 = 14 = 8 1/2
42 = 8 = 9 1/2
100 = 14 = 8

£ s d
380 = 5 = 7 3/4
197 = 15 = 8
180 = 9 = 11 3/4
180 = 5 = 7 3/4

Fedral Money.

The federal currency is of such nature that all questions respecting it whether in Addition Substraction Multiplication & Division are wrought in the same maner as those of whole numbers

Examples

dol cts m
485,50 = 7
379,75,5
105,75,2
485,50,7

dol cts m
584,16,3
199,25,5
384,90,8
584-16-3

dol cts m
87 = 37 = 4
58 = 66 = 8
28 = 70 = 6
87 = 37 = 4

dol cts
7858 = 95
3899 = 75
3959 = 20
7858 = 95

dol cts m
340 = 12 = 5
149 = 20 = 0
190 = 92 = 5
340 = 12 = 5

dol cts m
850 = 05 = 9
98 = 07 = 6
751 = 97 = 7
[illegible]56 = 05 = 9

Lucretia Goodridge
Lynn 1819.

Practical Questions is Lawful and Fedral Money

1st A man borrows twenty nine pounds thirteen shillings and fourpence half pen he pays nineteen pounds fifteen shillings and six pence three farthings how much remains unpaid? £. 9-17-9 3/4 = Ans

29=13-4-1/2
19-15-6 3/4
9 17 9 3/4

2d A man borrows one thosand three hundred eighteen dollars twenty five cents five mills, but he pays five hundred and eighty nine dollars seventy five cents five mills. how much remains unpaid, dols 728, 50 Ans

1318-25-5
589-75-5
728-50-0

3d Substract nine pence half penny from thirty five pounds £. 34. 19. 2 1/2 Ans

£
35-0-0
9 1/2
34-19 2 1/2

4th. Substract five mills from twenty four thousand dollars. dols. 23999. 99, 5 Answer

24000-000
5
23999-99 5

5th What is the difference between one and a thousand pounds £. 929. 19 11. 3/4 Answer

1000-00-0
1/4
999 19-11 3/4

24000--000
5
23999-99-5

Continued

6th A man is worth fourteen thousand, five hundred and sixty pounds sixteen shillings and four pence; but but he owes one man two thousand three hundred and forty six pounds ten shillings and eight eight pence; to another three thousand five hundred and nine pounds eighteen and ten pence half penny and to a third eight hundred and sixteen pounds fourteen and five pence half penny; how much will he have left after his debts are paid .... £ 7887.12.4 Answer

14567-16-4
2346-10-8
3509-18-10½
816-14-5½
6673-4-0
7894-12-4

7th A man borrows at one time, sixty nine dollars twenty five cents at another fifty [illegible] forty cents [illegible] at another twenty seven dollars seventy five cents [illegible] at a time twenty eight dollars [illegible] cents at another thirty nine dollars twenty five cents, and at thirty four five dollars What sum is it [illegible]

[illegible] Ans

69 25
45 40
27 75
142 40
112 45
29 95

8 20
28 45
45 10
112 [illegible]

Troy Weight

lb oz pwt gr
[illegible]
[illegible]
[illegible]
475-6-14-1[illegible]

lb oz pwt gr
724-[illegible]-7
175-[illegible]-11-15
74 [illegible]-11-7
72 [illegible] -7

Substract twelve grains fifteen pwt. eight ounces nineteen pounds from forty six pou
two ounces three pwt eight grains .... 26 lb 5 oz 7 pwt 20 gr Answer

lb oz pwt gr
[illegible]
[illegible]
26 [illegible]

Avoirdupois Weight

T cwt qr lb oz dr
45-12-2-23 7
17-14-3-25-8-9
[illegible] 14
45-12-2-25-9-7

T cwt qr lb oz dr
18-17-1-18-12-13
5-17-1-18-12-1
1-2-19-3-27-15-14
18-17-1-18-12-13

Substract eight drams ten ounces from nine tons one quarter
9 T 1 Cwt 0 qr 27 lb 5 oz 8 dr Answe

Apothecaries Weight

lb ℥ ʒ ℈ gr
[illegible]-4-1-11
[illegible]
58-[illegible]-6-1-19
8[illegible]-4-[illegible]

lb ℥ ʒ ℈ gr
12-[illegible]-11
19-9-6-1-1
5811-4-1-24
159

Supose I bui fifteen pounds five ounces three drams one scruple thirteen grain
sell ten pounds eleven ounces, six drams two scruples eighteen grains of the same, wich have I left? 4 lb 5 ℥ 4 ʒ 1 ℈ 15 gr Answer

lb ℥ ʒ ℈ gr
15-5-3-1-13
10-11-6-2-18
4 5-4-1-15

Cloth Measure

yd qr na
385=1=2
179=2=3
205=2=3
385=1=2

yd qr na
98-1-0
59-2-3
38-1-1
98 1 0

ee qr na
74-3-1
61-3-2
12-4-3
74 3 1

efr qr na
88-4-2
18-5-3
69-4-3
88-4-2

What is the difference betwen three nails and twenty five yards?

yds qr n
25-0-0
9
249-1

24 yds 3 qr 1 na Answer

Long Measure

miles fur rods yd ft in bar
35-4-20-3½-2-4-0
27-5-38-4-2-9-0
7 6-21-4-1-7-1
354 [illegible] 1 ½ 1-4-1

miles fur rods yd ft in bar
17-4 12 2 0 0 2
4-4-30 3½-1-10-2
18-7-21-5 1-10-1
17-5-12-4 0-8-2

Substract two barley corns one foot twenty rods three miles from eight mile two furlongs one yard nine inches

miles fur rods yd ft in bar
8-2-00-1-0-9-0
3-0-20-0-1-0-2
5 1 [illegible]

5 miles 1 fur. 20 rods 0 yd. 2 feet 8 in 1 bar Ans

Square Measure

340-100-21-145-110
187-1[illegible]-29 -8-134
152-103-21 1/45-120
340100-29-145-110

4829-15-4-123
3680-25-1/45-124
1108-19-7-143
4829-15-4-123

Lucretia Goodridge
Lynn 1819

A man has two farms. The first contans three hundred and forty acres seventy five rods; the contains eighty two acres ninety rods; how much more is the first than the second

257 A 145 rod Answer

A rod
340-75
82-90
257-145

Wine Measure

hhd gall qts pts gill
987-35-2-1-2
158-79 3-0-3
828-35-3-0-3
987-35-2-1-2

hhd gall qts pts gl
845-15-1-0-1
267 50-2-1-2
577-27-3-0-3
845-15-1-0-1

Bought a cask of brandy containing fifty five gallons two quarts; sold twenty eight gallons one pint two gills of the same how much remains unsold

27 gal. 1 pt. 0 qt 2 gill Ans

gall qts pts gill
55-2-0-0
28-0-1-2
27 1-0-2

Beer Measure

hhd gall qts pts
487-18-2-0
287-51-3-1
199-20-2-1
487-18-2-0

hhd gall
549 13-1-1
451-48-2-1
987-18 3-1
549-13-1-1

What is the differance bteen one pint and one hunred and thirty five hogshead

134 hhd 53 gal. 3 qts 1 pts Answer

hhd gll qts pts
135-0-0-0
000-0-0-1
134-53-3-1

Time

yr mo w d h m s
75-8-2-5-15-45-57
48-11-3-5-16-47-59
26-9-2-6-22-57-58
75-8-2-5-15-45-57

yr mo w d h m s
96-10-3-4-12-10-15
19-12-9-6-18-50-20
15-10-3-4-17-19-55
96-10-3-4-12-10-15

Substract forty five minuts fifteen seconds from ten years

9yr 11mo 3w 6 days 23h 14m 45s Answer

yr mo w d h m s
10-0-0-0-0-0-0
45-15
9-11-3-6-23-14-45

Suppose a man let himself to work five years stays only three years nine months one week four days; how long before his time is out does he goes

1yr 2mo 2w 3d Answer

yr mo w d
5-0-0-0
3-9-1-4
1-2-2-3

Reduction By Multiplication

Reduction by Multiplication teacheth to bring a high denomination to an equivalent value in a low denomination

Rule

Multiply each descending denomination by as many of the next lower denomination as make one in that wich you are about to reduce; thus proceed till the question is brought into the denomination required

Proof

Divide the last product by the last multiplier and that quotient by the next &c. If the last quotient equal to the first multiplicand the work is right

Example

```
In [illegible] farthings
            shillings
4)41[illegible]      pence
12)104160   farthings
2|0) 868|0
     [illegible]
```

```
   12     20
4)416640(104160(8680|434
  4        96      80
  16       81      68
  16       72      60
    6      96      80
    4      96      80
   24       0
   24
    0
```

```
4)41 540
12) 104160
2|0) 868|0
     434
```

Note

When their are several denominations in the question as for instance pounds shillings &c bring in the odd shillings when multiplying by 20 the odd pence when multiplying by 12 &c Proceed in like maner with all questions of this nature

Contiued

£ s d
85=12=8 how many farthings!
20
~~1712~~
12
20552
4
82208

Proof
4) 82208
12) 20552
2/0) 171/2 - 8
85=12- 8

N B When there is a remainder after divideing it is always of the same demomination with the dividend.

£ s d
8578
20
171560 shillings
12
2058720 pence
4
8254080 farthings

£ s d
340 = 9 . 8
20
~~6809 shillings~~
12
81716 pence

£
[illegible] 15 = 7
20
[illegible] shillings
12
[illegible] pence
4
[illegible] farthings

£ s d
[illegible] 49 - 1[illegible] 9 1/2
20
1059[illegible] shillings
12
12718[illegible] pence
4
[illegible]742 farthings

£
7 = [illegible]
20
[illegible] shillings
12
424[illegible] pence
4
[illegible] farthings

Troy Weight

lb oz dwt gr
347 = 0 = 0 = 0
12
4164 oz
20
83280 dwt
24
333120 lb
16656
1998720

lb oz dwt gr
210 = 8 = 12 = 0
12
2528 oz
20
50572 dwt

lb oz dwt gr
[illegible]
12
1413
20
28277
24
113018
[illegible]

lb oz dwt gr
18 5 9 21
12
[illegible]
20
[illegible]
24
[illegible]
858
106[illegible]

[illegible]

Avoirdupois Weigh

Reduce 3 T [illegible]
20
60 cwt
4
[illegible]
1725 lb
[illegible]
[illegible] dr

Apothecaries Weight

Reduce lb [illegible]
[illegible]

Cloth Measure

Reduce yd [illegible]
4
1380
4
5520

[illegible]

Long Measure

Reduce mile fur rod yd ft in bar
375-0-0-0-0-0-0
1760
2265
2646
315
66 5 2 5 0
[illegible]
1 8 5 0 2 4 0

miles fur rod yd ft in fod
27-5-18-3-1-8-1
8
22½
8858
5½
4429 3
442 9
[illegible] 72 2
1 4 6 1 6 7
12
17 5 4 0 1 2
3
5 2 6 2 0 3 7

1760
16-0-0-0-0-0-0
1056
176
28160

[illegible] 0-0-0 [illegible]
8
307
4
1 3 8 [illegible]
6 1 4 4 [illegible]
6 1 4 4½
1 7 5 8 9½
20 2 7 6 8½
[illegible]

Square Measure

Reduce
A rod yd ft in
130 0-0-0-0
160
7980
130
20800
30¼
624000
5200
629200
9
5662800
144
22651200
[illegible]
5662800
81544320

A rod yd ft in
37 0-000
160
2260
37
5960
30¼
17880
1490
19 [illegible] 90

Cubic Measure

Reduce 40 yards to inches
27
280
70
1080
1728
8640
2160
7560
1080
1866240

Reduce 3 tons of round timber to inches
40
120
1728
960
240
740
120
207360

Reduces 50 tons of hewn timber to inches
2
100
1728
172800

Reduce 125 cords of wood to inches
5
640
1728
5120
1290
4480
640
1105920

Wine Measure.

Reduce

thd gal qts pts gill
24-0000
63
72
144
1512
4
6048
2
12096
4
48384

thd gill qts pts gill
15-19-3-1-2
63
54
91
964
4
3859
2
7719
4
30878

hhd gal qts pts gill
9-25-1-0-0
63
32
56
592
4
2369
2
4739

Beer Measure

Reduce

hhd gal qts pts
35-0
54
140
175
1890
4
7560
2
15120

hhd gal qts pts
12-15-2-1
54
63
60
669
4
2654
2
5309

hhd gal qts pts
10-17-0-0
54
57
50
557
4
2228
2
4456
4
17824

Time

1 In [illegible] years how many [illegible] —— 141312 [illegible]

Note. I call 365 days a year altough it falls short a little.
yet it is excact enough for common purposes.

2 In 76 years month how many minuets

3 Reduce 1796 years to seconds

[illegible]
[illegible]
1[illegible]25
[illegible]
1[illegible]
6[illegible]7[illegible]
32 450
[illegible]
60
236 520 00
60
1[illegible] [illegible]20 [illegible]

165
13
59
16
219
742
7
5965
24
29956
11928
149136
60
8589160

1796
365
8980
10776
5388
655540
24
2622160
1311080
1579296 0
60
9459776 00
60
56 6986560 00

Federal Money

case 1

To Reduce dollars to cents

Rule

Place two cyphers at the right hand of the dollars and the work is done

Example

1 In 389 dollars how many cents 38900 Ans

2 Reduce 4847 dollars to cents 484700 Ans

case 2

To reduce dollars to mills

Rule

Annex three cyphers to the dollars

Examples

1 Reduce 389 dollars to mills 389000 Answer

2

Reduce 857 dollars to mills 857000 Ans

case 3

To reduce dollars and cents to cents

Rule 3.

Remove the comma from between the dollars and cents and the sum is cents

Examples

1 Reduce dol. 385,50 to cents

2.

Reduce doll 599,08 to cents

Case 4

To reduce dollars and cents to mills & mills

Rule 4

Remove the commas from between the dollars and cents and cents and mills and the whole sum is mills

Example

1 Reduce dol 38, 75, 7 to mills
2 Reduce dol 49, 09, 5 to mills
3 Reduce dol 17, 06 3 to mills

Note 1st

When you would bring cents into dollars point off the two right hand figures for mills the two next for cents; the left hand figures are dollars

Example.

1 In 38575 cents, how many dollars? dol 385, 75 cts

2 In 38705 cents, how many dollars? dol 387, 05 cts

Note 2d

To bring mills into dollars cents &c point off the first right hand figures for mills the two next for cents; the left hand figures are dollars

Examples

1 In 85697 mills how many dollars cents &c? dol. 85, 69, 7 Ans.

2 In 387543 mills how many dollars cents &c? dol. 85, 69, 7 Ans.

3 In 586085 mills how many dollars cents &c? dol. 85, 69, 7 Ans.

Reduction by Division

Reduction by Division teacheth to bring a low denomination to its equivalent value in higher denominations, and is the reverse of Reduction by Multiplication and is proved by it

Rule

Divide the lowest denomination given by so many of that ones as make one of next higher denomination; thus proceed with every ascending denomination till you have brought the question into the denomination required

Examples

1 In 416640 farthings, how many pounds

```
         12        20      £
4)416640(104160(8680(434  Ans
  16        96      80
  16        81      68
   6        72      60
   4        96      80
  24        96      80
  24         0
   0
```

By short Division

```
4)416640  farthings
12)104160 pence
20)868|0  shillings
   434    pounds  Ans
```

2 In [illegible] farthings how many [illegible] shillings &c.

```
          12    20     £
4)16[illegible] 4240(35[illegible] (17 13  4¾
  16      36    20
   9      64    159
   4      60    140
  16      40     19
  16      36
   3       4
```

Or thus:

```
4)16963
12)4240 - 3
20)35|3 - 4
Ans £. 17 13 - 4¾
```

Continued

3 In 99628 farthings how many pounds, shillings &c
£.103.15.7 Ans

```
   12      20    £   s  d
99628(24907(2075(103-15-7
      24     20
      --     --
       90     75
17     84     60
16     --     --
--      67    15
36      60
         -
24       7
```

```
4)99628
12)24907
20)2075|-7
   103-15
```

4 In 508742 farthings, how many pounds shillings &c.
£.529 18-9½ Ans

```
          12      20      £   s d
4)508742(127185(10598(529-18-9½
         12      100
         --      ---
          11      59
 8        60      40
--        --      --
28        118     19
28        108    180
--        ---    ---
 7         105    18
           96
 34        --
 32         9
 --
  22
```

```
4)508742
12)127185  2
20)10598   9
   529-18- 9½
```

Note

The foregoing and following questions are a proof to those in reduction by multiplication

Troy

5 In 1998720 grains how many pounds - 347 Ans.

```
         20    12
24)1998720(83280(4164(347
   192     80    36
    --     --    --
    78     32    56
    72     20    48
    --     --    --
     67    128    84
     48    120
     --    ---
     192     80
     192     80
     ---
       0
```

6 In 1898618 grains how many pounds, ounces &c   Troy
117 lb 9 oz 15 pwt 18 gr

```
              20      12
24) 678618 (28275 (1413 (117
    48        20     12
    --        --     --
    198       82     21
    192       80     12
    ---       --     --
      66       27     93
      48       20     84
      --       --     --
      181       75     9
      168       60
      ---       --
       138      15
       120
       ---
        18
```

Continued

7. In 1720320 drams how many in   3 tons Ans

```
                          28        4    20
16)1720320(107520(6720(240(60(3
   16        96       56    24   60
   120       115      112   --   --
   112       112      112    0    0
   ---       ---      ---
     83        32       0
     80        32
     --        --
     32         0
     32
     --
      0
```

8 In 22240 ounces how many cwt quarters &c   12 cwt. 1 qr. 18 lb. Ans

```
          28     4
16)22240(1390(49(12
   16     112   48
   --     ---   --
   62     270    1
   48     252
   ---    ---
   144     18
   144
   ---
     0
```

9 In 679680 grains how many pounds ~~ounces~~ Apothecaries wt 118 lb

```
           3      8      12
20)679680(33984(11328(1416(118
   60      3      8     12
   --      -     --     --
   79      3     33     21
   60      3     32     12
   ---     -     --     --
   196     9     12     96
   180     9      8     96
   ---     -     --     --
    168    8     48
    160    6     48
    ---   --
     80   24
     80   24
```

10 In 2535 scruples how many pounds ounces &c   8 lb 9℥ 5ʒ Ans

```
        8     12    lb ℥ ʒ
3)2535(845(105(8 - 9 5 -
  24      8    96
  --     --    --
  13     40     9
  12     40
  --     --
  15      5
  15
```

11 In 5520 nails how many yards?   345 yds Ans

```
4)5520
4)1380
   345
```

12 In 231 nails how many yards quarters &c   14 yds 1 qr 3 — Ans

```
4)231
4) 57-3
   14-1-3 na
```

Continued

13 In 71850240 barley corns how many miles? 378 Ans

```
3)71850240(23950080(1995840(665280(378
  6          12         18        5280
  11         119        19        13728
   9         108        18        12920
  28         115         15        14080
  27         108         15        14080
   15          70          8
   15          60          6
    24         120          24
    24         120          24
       0        00             0
```

Note

In the last question I bring barley corns to yards, and then divide by 1760 the number of yards in a mile

14 In 28160 yards how miles? 16 Ans

```
1760)28160(16
     1760
     10560
     10560
```

15 In 814449200 square inches how many acres 190 Ans

```
144)814449200(5656200(628200
    720         54
     944         26
     864         18
      809          82
      288          81
        1152          18
        1152          18
          00           00
                4 160
     121)628200(20800(190
         242      160
          968      480
          968      480
           00        0
```

Note

In the last question I bring inches to yards and then divide by 4840 the number of yards in a acre.

16 In 207360 cubic inches how many tons of round timber 3 tons Ans

```
1728)207360(120(3
     1728    120
     3456
     3456
```

17 In 172800 cubic inches how many ton of hewn timber 2 tons Ans

```
1728)172800(100(2
     1728    100
       00
```

Continued

18 In 1105920 cubic inches how many cord of wood? .... 5 cord Ans

728) 1105920 (
1336 [illegible]
[illegible] 1 2
[illegible]
0

19 In 48984 gills how many hogsheads wine? .... 24 Ans

4) 48984 (12096 (6044 (1512 (24
4 ... 12 ... 4 ... 126
8 ... 7 ... 20 ... 252
8 ... 8 ... 20 ... 252
9 ... 16 ... 4
8 ... 16 ... 4
24 ... 4
24 ... 4

In 4796 pints how many hogsheads, gallons &c. wine 9 hhd 25 gal 1 pt

2) 4798 (2369 (592 (9 – 25 – 1
4 ... 20 ... 567
7 ... 36 ... 25
6 ... 36
19 ... 9
18 ... 8
18 ... 1
18

21 In 15120 pints how many hogsheads beer? 95 Ans

2) 15120 (7560 (1890 (35
14 ... 4 ... 162
11 ... 35 ... 270
10 ... 32 ... 270
12 ... 36
12 ... 36
0 ... 0

22 In 17824 pints how many hogsheads, gallons &c. beer 10 hhd. 17 gal. Ans

4) 17824 (4456 (2228 (557 (10 – 17
16 ... 4 ... 20 ... 54
18 ... 4 ... 22 ... 17
16 ... 4 ... 20
22 ... 4 ... 28
20 ... 16 ... 28
24 ... 16
24

23 In 1419120000 seconds how many years? 45 Ans

60) 1419120000 (23652000 (394200 (16425 (45
120 ... 140 ... 24 ... 1460
219 ... 565 ... 154 ... 1825
180 ... 540 ... 144 ... 1825
391 ... 252 ... 102
900 ... 240 ... 96
120 ... 120 ... 60
120 ... 120 ... 48
000 ... 00 ... 120
120

Continued

24 In 56638656000 seconds how many years? 1796 Ans

```
                      60          24         365
60) 56638656000(943977600(15732960(65540(1796
    540          60          144         365
     263         343          133        2905
     240         300          120        2555
      238         439           132       3504
      180         420           120       3285
       586         197            96       2190
       540         180            96       2190
        465         177            0
        420         120
         456         576
         420         540
          360          360
          360          360
           00            0
```

25 In 8588160 minnits, how many lunar years? 16 yr 5 mo Ans

```
 [illegible] 88160([illegible](5964(852(213(16
 [illegible]        120        56      8     13
  258              231        36      5     83
  240              216        35      4     78
   188              153        14     12      5
   [illegible]      144        14     12
   [illegible]       96
   [illegible]       96
    180
     360
     360
```

26 In 87950 cents how many dollars and cents Dol. 879, 50 Ans

```
           Dol  ct
10) 87950(879, 50
    80
     79
     70
      95
      90
       50
       50
```

27 In 53987 mills, how many, dollars, cents, &c Dol 53. 98. 7. Ans

```
           Dol ct  m
10) 53987(53, 98, 7
    50
     39
     30
      98
      90
       87
       80
        7.
```

In these questions I bring second to days and then divide by [illegible]

Multiplication of Federal Money

case 1

When the price is dollars only, multiply the whole quantity by the price of one yard pound & the product will be the price of the whole quanty, in Dollars

Examples

1 To what will 385 acres of land amount at 25 dolars per ares

385
25
1925
770
96 25

2 To what will 45 barells of flour amount, at 14 dollars per barrels

45
14
180
45
630

3 What will be 18½ yds come to at 4 dollars per yard!

18½
4
72
2
74

4 What will 25¼ yds come to at 8 dollars per yards

25¼
8
200
2
202

Questions

yds	yds	yds	yds	yds	yds
398	190	95	47	74	29½
12	10	9	7	8	6
4776	1900	855	329	592	177

case 11

When the price is cents only, multiply the whole quantity by the price of one yard, pound, &c then cut off the two right hand figures of the product for cents the lft hand figures are dollars

Example

1 What will 125 yards come to at 75 cents per yars

125
75
625
875
93,75

2 To what will 216 yards amount, at 25 cents per yard

216
25
1080
432
54,00

Questions

yds
185
66
29 3 [illegible]
23 3 4
25 6,7 4

yds
132
[illegible]
6 6,[illegible]0

yds
[illegible]
25
41 50
1660
207,50

yds
100
49
900
400
49,00

yds
395
56
2370
1975
221,20

yds
[illegible]
[illegible]
[illegible]
[illegible]
13,44

yds
5
56
3,5[illegible]

yds
9
15
45
6[illegible]
6,75

case 181

When the price is mills only multiply the whole quantity by the price of one yard pound & then point off the first right hand figure of the product for mills the two next for cents, the left hand figures are dollars

Examples

1 To what will 385 pounds of chalk amount at 9 mills per pound

385
9
3,46,5

2 To what will 475 yards amount at 8 mills per yards?

475
8
3,80,0

3 Supose a man worth 8756 dol and is tax 3 mills on the dollars, what will his whole tax amount to?

8756
3
26,26,8

4 To what will 5867 yards amount at 5 mills per yard?

5867
5
29,33,5

Questions

859
9
2,72,9

154
6
92,4

755
8
60,40

446
3
1,33,8

570
5
5,85,0

84
4
33,6

98
9
88,2

Case 4 When the price is dollars and cents, place the units figure of the quantity under the unit figure of the cents &c and proceed as in simple multiplication point off the two right hand figures of the product for cents, the left hand figures are dollars

Note

When the cents are expressed by units only the tens place must be suplied with a cyp

Continued

Examples

1 What will 253 yds come to at 5 dollars 12 cents per yard?

```
   5,12
    253
  -----
   1536
  2560
 1024
 ------
 1295,36
```

2 What will 498 yds come to at 3 dollars 5 cents per yard?

```
   3,05
    498
  -----
   2440
  2745
 1220
 ------
 1518,90
```

Questions

```
   598
  4,25
  ----
  2990
 1196
2392
-------
2541,50
```

```
   150
  3,16
  ----
   900
  150
 450
------
474,00
```

```
   980
  7,09
  ----
  8820
  000
 6860
------
6948,20
```

```
   145
   105
  ----
   000
   00
 14525
------
 152,25
```

```
   45
   106
  ----
   270
   00
  45
 ----
 47,70
```

```
   712
  1875
  ----
  3560
 4484
5796
712
-------
13350,00
```

```
   94
   208
  ----
   752
   00
 188
-----
195,52
```

```
   25½
   266
  ----
   150
  150
 5139
-----
 67,59
```

```
   84¼
   120
  ----
    00
   166
  4430
 ------
 101,10
```

```
   26¾
   240
  ----
    00
   104
  5180
  52
 -----
 64,20
```

```
   12½
   125
  ----
    60
   24
  126 5
 ------
 15,6 5½
```

case 5

When the price is cents and mills or dollars cents and mills place the units of the quantity under the mills, &c and proceed as in case simple multiplication; point off the first right hand figure of the product for mills, the two next for cents; cent; what the remains on the left hand are dollars.

Note

When cents are expresed by units [illegible] the place of tens must be supled with a cypher

Example

1 What will 924 yds come to at 9 dollars 25 cents, 6 mills per yds

```
   9,25,6
      924
  -------
   37024
  18512
 83304
 --------
 8547,344
```

2 What will 453 yards come to at 84 cents 7 mills per yard

```
  ,84,7
   453
  ----
  2541
 4235
3388
------
383,691
```

Questions

785
4,50,7
5495
00
9925
9140
9597,99,5

956
25,0,86
2196
2848
000
1780
712
8990,6,16

95
13,19,9
855
855
95
285
995
12599,0,5

94
6,18,5
470
752
94
564
581,39,0

78
9,33,8
724
234
233
702
728,36,4

45
15,5
225
225
915
93,97,5

183
1,207
1281
000
366
37881

115
7,25,9
45
75
90
105
10879,5

11 To what will 859 pair of Shoes amount at one dollar eight cent five mills per pair

Dol 992.01.5 Ans

185
859
2665
995
9200
992,01,5

Compound Multiplcation

Compond Multiplication is when the multiplicand consists of several denominations and is an excellent rule in finding the amount of several goods when the price is in lawful money

Rule

place the multiplier under the lowest denomination and carry for the same is in lawful money

case 1

When the quantity does not exceed 12 multiply the price of one yard pound &c by the whole quantity the product will be the answer

Examples

What will 3 yards come tto at 1 pound 6 shilling and 8 pence per yard?

£ s d
1 6 8
3
4 0 0

2 What will 5 yards come to at 1 pound 10 shillings and 3 one half penny per yard

£ s d
1 10 3½
5
7-11-5½

Continued

In the second escample I say fine pece are two pencehf peny; I set down the half peny and carry two; the five times three are fifteen and : I carry one seventeen pece I set five and carry one, then five ten are fifty and one I carry are fifty one I set down eleven and carry two; then five times one are five and two I carry are seven pounds.

Examine

What will 4 pounds at 1 pound 8 shillings and 6 pence per yds

£ s d
1-8-6
4
5-14-0

What will 2 pounds at 1 pound 13 shillings and 4 pence per yd

£
1-13-4
2
3-16-8

case 2

When the quantity is any number in the multiplication table over twelve multiply the twelve price of one yard pound &c by those numbers wich when multipled together will produce the given quantity

Example

What will 15 yards come to at 1 pound 3 shillings and 4 pence haf peny per yard?

£ s d
1-3-4½
5
5-16-10½ price of 5 yd
3
17-10-7½ price of 15 yd

What will 24 yard come to at 8 shillings and 6 pence three farthings per yard?

£ s d q
0-8-6¾
6
2-11-4½ price of 6 yd
4
10-5-6

Example

What will 18 pounds come to at or 1 pound and 7 shillings 2 pence half peny per yard

£ s d
1-7-2½
6
8-3-3
3
24-9-9

What will 33 pounds come to at 1 pound 13 shillings 4 pece half pence per yard

£ s d
1-13-4
11
18-6-8
3
55-0-0

case 3

When the quantity is such that no two numbers multiplied together will produce it exactly or when there are parts of a yard pound &c in the question multiply as in Case 2 by two such numbers as come nearest to the given quatity; then add or substract the price of the odd yards or parst of a yard pound &c as the case may require

Examples

1 What will 17 yds come to at 1 pound 9 shilling and 4 pence per yard

1-9-4
4
4-13-4
4
18-19-4
1-3-4
19-16-8

2 What will 19½ yds come to at 8 shilling and 6 pence half peny per yard

0-8-6½
10
4-5-5
2
8-10-10
4-3¼
£8-6-6¾

Example

What will 7 shillings 5 pence come to at [illegible] per pound

[illegible] price of 3 lb
[illegible] price of 6 lb
[illegible] price of 1 lb
[illegible] price of [illegible]

What will 19½ pounds come to at 8 shilling 5 pence per pound

[illegible] price of 1 lb
[illegible] price of 10 lb
[illegible] price of [illegible]
[illegible] price of [illegible]

case 4

When the quantity is any number of hundreds under ten, find the price of one hundred by Case 2 then multiply the price of one hundred by as many as there are hundreds in the question.

Examples

1 What will 500 yds come to at 1 pound 1 shilling and 4 pence per yard

£ s d
1-1-4
10
10-13-4 price of 10 yds
10
106-13-4 price of 100 yds
5
530-6-8 price of 500 yds

2 What will 4[illegible] yds come to at 6 shilling and 3 pence half peny per yard

£ s d
0-6-3½
[illegible]
9-2-1 price of [illegible] yds
10
[illegible] price of 100 yds
[illegible] price of [illegible] yds

Examples

What will 200 pounds come to at 8 shilling per pound

£ s d
0-8-0
10
4-0-0
10
40-0-0
[illegible]
20-0-0

What will 600 pounds come to at 1 pound 2 shillings 7 pence half peny per pound

£ s d
1-2-7½
10
11-6-3
10
113-2-6
6
79-15-0

case 5

When the quantity is any number of thousands and thirteen find the price of one thousand by Case 4th then multiply the price of thousand by so many as there are thousands in the question.

Examples

1 What will 3000 yds come to at 1 pound 2 shillings and 9 pence per yds

1-2-9
10
11-2-6 price of 10 yds
10
1112-17-0 price of 100 yds
10
1112-10-0 price of 1000 yds
3
3337-10-0 price of 3000 yds

2 What will 4000 yards come to at 3 shillings 3 pence 1 farthing per yard

£-s-d
0-3-3¼
10
1-12-8½ price of 10 yds
10
16-7-1 price of 100 yds
10
163-10-10 price of 1000 yds
4
654-3-4 price of 4000 yds

Examples

What will 5000 come to at 17 shillings 4 pence per pound

£-s-d
0-17-4
10
8-13-4
10
8[illegible]-[illegible]-[illegible]
10
866-13-4
5
4333-6-8

What will 6000 pounds come to at 1 pound 6 shillings 8 pence per pound

£-s-d
1-6-8
10
13-6-8
10
133-6-8
10
1333-6-8
6
8[illegible]-[illegible]-[illegible]

case 6

When the quantity is any number of hundreds or thousand or thousands over twelve which are expressed by number in the multiplication table find the price of one hundred or thousand by the foregoing Cases; then multiply the price of one hundred or thousand by two such numbers as when multiplied together will express the hundreds or thousand in the question

Examples

What will 3800 yd come to at 16 shillings and 8 pence per yard

What will 4200 pounds come to at 6 shillings 8 pence per yard

Continued

£ s d
0-15-7
10
7-15-10
10
77-18-4
10
779-3-4
6
4675-0-0
6
28[illegible] - [illegible] - 0 - 0

£ s d
0-16-8
10
8-6-8
10
83-6-8
7
583-6-8
6
3500-0-0

case 7

When the quantity is hundreds or thousands wich are not expressed by whole nubers in the multiplication table find the price of the whole quantity as near as you can by Case 6 then add or subtract the price of the odd hundreds or thousands as the case may require.

Examples

What will 1900 yds come to at two shillings and 6 pence per yard

£ s d
0-2-6
10
1-5-0 pr of 10 yds
10
12-10-0 pr of 100 yds
6
75-0-0 pr of 600 yds
3
225-0-0 pr of 1800 yds
12 10 0 pr of 100 yds
237 10 0 pr of 1900 yds

What will 23000 yards come to at 1 shilling and 4 pence 3 furtings per yard

£ s d
0-1-4¾
10
0-13-11½ price of 10 yds
10
6-19-7 price of 100 yds
10
69-15-10 price of 1000 yds
6
418 15-0 pr of 6000 yds
4
1675 0-0 pr of 24000 yds
69 15 10 pr of 1000 yds
1605 4 2 pr of 23000 yds

Examples

What will 85000 pound come to 12 shillings 9 pence per pound

£ s d
0-12-9
10
6-7-6 price of 10 yard
10
[illegible]-15-0 price of 100 yds
10
612-1-0 price of 1000 yds
12
7550-0-0
7 price of 12000 yds
51450-0-0 price of 84000 yds
612 10 0 price of 1000 yds
52062 10-0 price of 85000 yds

What will 1700 come to at 6 shillings 8 pence per yard

£ s d
0 6-8
10
3-6-8 price of 10 yds
10
33-6-8 price of 100
4
133-6-8 price of 400
4
533-6-8 price of 1600
33-6-8 price of 100
566 13 4 price of 1700

Examples

When the quantity consists of units of units then hundred thousand &c find the price of the thousand hundreds &c seperately; then add the price of the several parts together; the sum will be the price of the whole quantity

Examples

To what will 48448 yards amount at two shillings and 6 pence per yard

£ s d
0 = 2 = 6 pr of
10
1 = 5 = 0 pr of 10 yds
10
12 = 10 = 0 pr of 100 yds
10
125 = 0 = 0 pr of 1000 yds
8
1000 = 0 = 0 pr 8000 yds
6
6000 = 0 = 0 pr of 48000
50 = 0 = 0 pr of 400 yds
6 = 0 = 0 pr of 48 yds
6056 = 0 = 0 price of 48448 yds

£ s d
12 = 10 = 0 pr of 100 yds
4
50 = 0 = 0 pr of 400 yds
0 = 2 = 6 pr of 1 yd
8
1 = 0 = 0 pr of 8 yds
6
6 = 0 = 0 pr of 48 yds

Examples

2 To What will 96369 yards amount at two shilings and 4 pense per yard

£ s d
0 - 13 - 4 pr of 1 yd
10
6 - 13 - 4 pr of 10 yds
10
66 - 13 - 4 pr of 100 yds
10
666 - 13 - 4 pr of 1000 yds
9
5999 - 6 - 8 pr of 9000
12
64000 - 0 - 0 pr of 96000
200 - 0 - 0 pr of 3000
40 - 0 - 0 pr of
0 - 0 pr 600
64246 - 0 - 0
12 | 96369

66 - 13 - 4 | 100
3
200 - 0 - 0 | 300
6 - 13 - 4 | 10
6
40 - 0 - 0 | 600
0 - 13 - 4 | 1
6 - 0 - 0 | 9

Examples.

3 To What will 92840 yards amount at 2 shillings 6 pence per yar

Continued

£
0 - 2 - 6 pr of 1 y
10
1 - 5 - 0 pr of 10 y
12 - 10 - 0 pr of 100 y
10
125 - 0 - 0 pr of 1000 y
4
500 - 0 - 0 pr of 4000 y
8
4000 - 0 - 0 pr of 40000 y
100 - 0 - 0 pr of 1000 y
5 - 0 - 0 pr of 40
4105 - 0 - 0 pr of 32840 y

£
12 - 10 - 0 pr of 100
8
100 - 0 - 0
1 - 5 - 0 pr of 10 yd
5 - 0 - 0

Examples

To What will 1573½ yards amount at 4 ~~shillings~~ and 6 pence per yard

0 - 4 - 6
10 price of 10 yds
2 - 5 - 0
10 price of 100 yds
22 - 10 - 0
12 price of 1200 yds
270 - 0 - 0 price of
15 - 15 - 0 price of
1 - 14 - 10½ price of ¼
287 - 9 - 10½

2 - 5 - 0
7
15 - 15 - 0

0 4 - 6
7¾
1 - 11 - 6
3
1 1½
1 - 14 - 10½

Example

To What will 1277¾ yards amount to 4 shillings and 6 pence per yard

1 - 4½
10
11 - 11 - 3
10
117 - 17 - 6
5 - 8 - 9
4 - 1 - 9¾
178 - 1 - 0¾

£
1 - 11 - 9
5
5 - 8 - 9

1 - 3 - 4½
9½
10 - 1½
1 - 6¼
4 - 8 - 9¾

Case 9

[illegible] To find the price of and hundred gross or 112 pounds having the price of one hundred pound giving

Rule

Multiply the price of one pound by 7 its product by 4 and this product again by 4 the last product will be the answer

Short Division.

[illegible] when the divisor does not exceed 12, and is performed in the mind only, the several steps [illegible] by the [illegible] [illegible] others [illegible] are omitted in this and this work wrought [illegible] in the mind.

Rule. Write the divisor [illegible] the dividend in the usual way, then draw a line under the dividend and inquire how many times the divisor is contained in one or more figures of the dividend, which being found place the first quotient figure directly under the unit figure of that portion of the dividend which you have [illegible] mentally; multiply the divisor by the quotient figure and subtract the product from the dividend, to the remainder bring the next figure of the dividend and inquire how many times the divisor is contained in that number when found [illegible] as before. Thus continue till every figure of the dividend is divided. Note. If there is a remainder after all the figures of the dividend are divided, make a short line at the right hand of the quotient at the end of which place the remainder.

Example

1
3)8[illegible]7[illegible]9
Ans. [illegible]2[illegible][illegible]1-1 Rem.
3
8[illegible]7[illegible]9

2
3)55765
[illegible]588-1
3
55765

3
3)1[illegible]656[illegible][illegible]
4552207
3
13656[illegible]12

4
5)73[illegible]75
14775
5
73[illegible]75

Lucretia Goodridge Lynn
1811

Short Division

4)183796
45949 -
4
183796

6)138547
23091-1
6
138547

7)346756
49536-4
7
346756

8)49725
6215-5
8
49725

9)65548
7283-1
9
65548

11)35728
3248
11
35728

12)58536
4878
12
58536

Practical Questions

1st. Divide six thousand, seven hundred and sixty four by nineteen
356 Answer.

19)6764(356
57
106
95
114
114

2d. Divide one thousand, nine hundred and sixty four by three hundred and fifty
19 Answer

346)6784(19
346
3004
3004

3d. If five hundred and fifty five dollars be divided equally among fifteen men what will each have?
37 dol. Answer.

15)555(37
45
105
105

Lucretia Goodridge [illegible]

Compound Division

Compound Division is when dividend consist of several denominations.

Rule. seperate the divisor from the dividend as in simple division; then proceed to divide beging with the highest denomination and having divided it if there be a remainder, reduce it to the next lower denomination and add in that which is of the same name; then divide as before. Thus continue reduce and divide till every denomination is divided.

Case 1. When the shares are equal [illegible] of the number of partners the quotient will be each one's particular share.

Examples

1 If £ 2499 [illegible] among [illegible] what will each have? £ 1 3 4 ¼

15) £249 9 | 17 2 -
[illegible]

2 If £ 17 10 3 ¼ be given equally among 14 men what will each have?

14) 17 10 | 1 5 ¼
[illegible]

Contin^d

£ [illegible] divided equally among [illegible] persons [illegible]

4)

9) 65
7

6 1

£ 23 12 1 [illegible] equally among [illegible] what will each have

19

Twenty [illegible] persons [illegible] they [illegible] what must each pay

2 l. 6

3d

[illegible]

153
4
1
1

When the divisor does not exceed 12, [illegible] divisor [illegible] figures [illegible] the same [illegible]

Example

1 If 4 pounds be divided equally among 3 persons what will each have

[illegible]
1-6-0

2 Divide 7 pounds 11 shillings and 7 pence half penny equally among 5 persons

£ s d
5) 7-11-7 1/2
1-10-3 1/2

Divide 12 pounds 2 shilling and 2 pence and 2 farthings equally among 7 persons

7) 12 - 2 - 2 2/4
1 - 14 - 7 1/4

4 Divide 12 pounds 5 shillings equally among 10 persons

£ s d
10) 12-5-0
1-4-6

If £4 10-3 be divided equally among twelve men what will each have? 7/6 1/4 Ans

£ s d £ s d
4 10-3 (0-7 6-1/4
20
12) 90 (7
84
6
12
12) 75 (6
72
3
4
12) 12 (1
12

If 13-0-9 be divided equally among six men what will each have

£ s d £ s d
6) 13-0-9 (2-3-4 1/2
12
1
20
6) 20 (3
18
2
12
27
24
3
4
6) 12 (2
12

7 A gentleman dying left £969-18 to be divided in the following maner viz. To his widow he gave one third part and the remainder was to be divided equally among 6 children what was each one's portion

£ s d
3) 969-18-0
323-6 - widows portion
6) 646-12
107-15-4 each childs portion

[illegible] 1820

Continued

Case 1. Having [illegible] any number or quantity given to find the price of one yard, pound, &c.

Rule. Divide the price of the whole number or quantity by the number or quantity; the quotient will be the price of one yard, pound, &c.

1. If [illegible] yards of cloth, what is the price of one yard

[illegible]

2. If [illegible] yards cost £ 261 13 4, what is it per yard? [illegible]

£ 261 13 4

20

110)4033(

3300

733

12

110)8796(

8800

3. If [illegible] yards cost [illegible] what is it per [illegible] Answer

[illegible]

4. If [illegible] what is the price of [illegible]

[illegible]

Continued

Case 3 When the shares are unequal divide the sum by the number of simple shares; the quotient will be the first one share. then multiply the first one share by so many as the second has shares more than the first, the product will be the second's share. Thus proceed for every succeeding share.

— Proof

Add all the shares into one sum, if it be equal to the dividend the work is right

Examples

Divide £ 119-1 among A B and C; give B twice as much as A and C three times as much as B; what will each have

A has 1 simple share
B has 2 simple shares
C has 6 simple shares
9 number of simple shares

9)112-1(12-9 A's simple share
2
24-18 B's share
3
74-14 C's share
112-1 Proof

If you divide £ 964 between A and B and give B twice as much as A what will each have

121 6 8 is A's share
242 13 4 is B's share
Ans

3)964
121-6-8 A's share
242 13 4 B's share
964-0-0 Proof

Continued

Divide [illegible] among A B C and D give B three times as much as A C four times as much as B and D [illegible] what will each have

A, 1
B, [illegible]
C, 18
D, 61
76 [illegible]

7 [illegible]

A, 4-0
B, 1-1-13
C [illegible]
D [illegible]

Divide [illegible] among A B C and D give B four times as much as A, C three times as much as B and D ten times as much as all the others, what will each have

A 1
B 4
C 12
D 170
187 9898-9 [illegible] A
 374
 98 B
 20
(187) 196 246-0-5
 187 246-18-8 6
 99 10
 12 5-[illegible] D
(187) 1122
 1122

A Gentleman dying left £666-18 of which his widow was to have one third part and the remainder was to be divided among four children in such a manner as to give the eldest a double portion. What did each have

9) 666-18
 222-6 widow portion
 444-12 [illegible]
 40
 [illegible]
 40
 4
 20
 8) 22 [illegible]
 88
 [illegible]
 111-2-8

Continued

Divide $[illegible] among A, B and C [illegible]

[illegible]

Divide $[illegible] [illegible]

[illegible]

Division of Federal Money

Case 1. When the divisor is [illegible]

Rule. Proceed as in simple division [illegible] of the quotient [illegible]

[illegible]

there be [illegible]

[illegible]

Continued

[illegible]

72
[illegible]

If three thousand [illegible] dollars be [illegible] equally [illegible]

[illegible]

If [illegible] dollars [illegible] divided equally among [illegible] men what will each have [illegible] Answer

[illegible]

If [illegible]

[illegible]

Case [illegible]

Rule. [illegible]

9)64

3d

[illegible]

Example

[illegible]

1. When the [illegible] is greater than the number of dollars in the [illegible] the quotient will be [illegible] or cents and mills

Divide [illegible] equally among [illegible] men what [illegible]

[illegible]

Divide [illegible] dollars [illegible] equally among 10 men [illegible]

or 98c 4 m.

[illegible]

Divide [illegible] dollars [illegible] equally [illegible] what will each [illegible]

[illegible] 71 4 m

1612 [illegible]

Case [illegible] When [illegible]

Rule. [illegible] then point off the [illegible] right hand figure of the quotient for [illegible] the two next for cents, and the remainder on the left hand are dollars

Examples

[illegible]

Continued

3 Two hundred and ninety five dollars twenty cents four mills be divided equally among thirteen men what will each have Answer [illegible]

13)225,20,4(17,32,[illegible]

34

26

122

114

[illegible]

105

104

1

4 If one hundred and two dollars eight cents six mills be divided equally among nine men what will each have dol 11,34,3 Ans

9)102,086

11,34

5 If 45 yards of cloth cost 153 dollars 97 cents 5 mills, what is the price of one yard dol 3,42,1 Answer

45)153,97,5(3,42,1

135

247

225

224

225

6 If 188 yard cost 37 dollars 88 cents 1 mills, what is the price of 1 yard cents 20,1 Answer

188)37-88-1(20-1

376

28

0

281

7 If 15 yards cost 108 dollars 79 cents 5 mills, what is the price of one yard dol 7,25,3 Answer

15)108-79-5(7,25,3

105

37

30

79

75

45

45

Practical Questions in Federal Money

[illegible] A B and C [illegible] B [illegible]
[illegible] B, [illegible]

[illegible] 23. [illegible]
[illegible]
[illegible]

1
[illegible]
12
16 [illegible]

2 A [illegible]
[illegible]
[illegible]
[illegible]

[illegible]

3 [illegible] 277 [illegible]

[illegible] 299 [illegible]

4 [illegible] A B C [illegible] B
[illegible] C [illegible] B [illegible]
[illegible]

1
12
120
1200
[illegible]
12
[illegible] 147.60
10
3392 1470.08
10
2666 14070.08
6667
6665

[illegible] A [illegible]
[illegible]

Continued

7 Divide [illegible] dollars in such a manner as to give A an eighth part and B the rest what will each have
dol 57.75
404.25

8 | 462
57-75 A Share
404-25 B Share

Aplication of the forgoing Rules

Questions

1 Write in figures the following number viz. [illegible] hundred and two million three hundred and four thousand five hundred and six
102304506

2 A B and C bought a quantity of goods between them A paid 42 dollars B 75 dollars and C 1056 dollars what did the goods cost 1173 dol. Ans

142
[illegible]
1156
1873

3 A gentleman has four farms, The first is valued at £ [illegible] the second at £ 2[illegible] the third at £ 158.14.7½ the fourth at £ 1250: what are they all worth £344.[illegible] Ans

[illegible]
[illegible]
158 . 4 - 7½
12 . 3 - 0
£344 . [illegible] ½

4 A man bought three horses, for the first he gave [illegible] dollars [illegible] cents, for the second 97 dollars [illegible] cents, and for the third [illegible] dollars [illegible] cents, what did the horses cost him [illegible] Answer

[illegible]
[illegible]
2[illegible] 50

Contined

5 How many must be added to [illegible] in order to make the sum 149 54 Ans

95
54

6 How many must be taken from 149 in order to make the remainder 54
95 Ans

149
54
95

7 What is the difference between one hundred and one and two thousand and two
1901 Ans

2002
101
1901

8 Suppose a man born in the the year 1743 how old will he be in the year 1797
54 Ans

1797
1743
54

9 A challenged B to swap horses. A valued his horse at 120 Dollars & B valued his horse at 92 Dollars A being unwilling to pay the the differance they agreed to split the difference. How much boot money did B receive 14 Dol Ans

120
92
2)28
14

10 What is the amount of 164 and 75 12300 Ans

164
75
820
1148
12300

11 Suppose a corn field contains 173 rows and each row produce fifteen bushels. how many bushels will the whole field produce. 2595 bushels Ans

173
15
865
173
2595

Continued

- To what will the corn in the last question amount at 6/8 per bushel ——— 1925 Answer

[illegible]

16 6 6 11 — 4 [illegible]
2 1 7 - 6 — [illegible]
2 1 6 — [illegible]
1 11 4 [illegible]
1 9 2 5 - 8 - 0 [illegible]

Said Harry to Tom if you divide the number of my apples by [illegible] the quotient will be 15: now if you understand figures well enough to tell how many apples I have you shall have a third part of them; What number of apples had Harry and how many did he give Tom

45 number [illegible]
15 he gave to Tom

15
3
[illegible]
45

14 How many half and farthings are there in £15-10-7

7454 half pence
14908 farthings

15-10-7
20
310
12
3727
2
7454
2
14908

15 Said A to B how old are you? 19 years answered B and how old are you To wish A replied the sum of both our ages is 55 now if you will tell my age in two minutes I will give you as many farthings as I am years old how old was A and how much money did he give B

36 A's age
9 pence

55
19
36

Continued

1? $1176 dollars is divided among [illegible] that each man's share is 14 dollars how many [illegible] Answer [illegible] men

(14) 1176 (84
112
56
56

Divide 87 dollars 50 cents among A, B, C, D and E give B one dollar more than A C one dollar more than B &c what will each have

15, 50 A's share
16, 50 B
17, 50 C
18, 50 D
19, 50 E

[illegible]

18 A gentleman had two sons and a daughter, to whom he gave the following sums viz. To the first son he gave £ 218.10.8, to the second £ 139.17.6, and to the daughter a sum which if added to the second sons would make a sum equal to the first sons, what was his daughter's portion £ 78.13.2 Answer

218-10-8
139-17-6
78-13-2

What number is that which if multiplied by 7 and the product divided by 9 will leave 50 in the quotient [illegible] Answer

[illegible]

Continued

20 What is the difference between six and eight pence and eight and six pence   Ans [illegible]

8 6
6 8
1 10

21 The product of A age and B age is 8[illegible] A age is 1[illegible] years what is B age   Ans [illegible]

[illegible]

Single Rule of Three or Direct Proportion

In the Single Rule of three Direct there are three numbers given to find a fourth number which shall be to the third as the second is to the first, or in other [illegible] proportion to the third as the [illegible] the first. When more requires more or less requires less the proportion [illegible] direct proportion. When more requires more the third term is greater than the first and then the fourth [illegible] is greater than the [illegible] term. When less requires less the third term is less than the first and then the fourth number or answer is less than the second term.

Rule. In stating a question that number which is of the same name with the answer required must be the second term. That number which asks the question must be the third term. That number which is of the same name with the third term must be the first term. Note 1 The first and 3rd terms must always be of the same name and denomination. Note 2 If the second or middle term consist of more than one denomination it must be reduced to the lowest mentioned. Having [illegible] the [illegible] multiply the second and third terms together and divide the [illegible] by the first term the quotient will be the answer [illegible]

Note The answer [illegible] always [illegible] in the same denomination with the mi[illegible]

Continued

term which if it be a low denomination must be reduced to the highest possible. Note 4 The proportion between the terms in the Single Rule of Three is thus expressed viz As the first term is to the second so is the third to the answer required. As 1 : 2 :: 3 : 6

1 If 5 yards of cloth cost 15 dollars what will 20 yards cost at that rate

yds dol yds
5 : 15 :: 20
20
5) 300 (60
30
0

3 If 15 dollars buy 5 yards of cloth how many yards will 60 dollars buy

dol yds dol
15 : 5 :: 60
5
15) 300 (20 yds Ans
30
0

These first question are the same but differently varied and are a proof to each other

5 If 9 yards cost £ 10-16; what will 69 yards cost at that rate.*

9 : 10-16 :: 69
20
216

In this example there being two denominations in the middle term I reduce it to the lowest which is shilling; then state the question and proceed as in the first example.

2 If 20 yards of cloth cost 60 dollars what will 5 yards of the same cost

yds dol yds
20 : 60 :: 5
5
20) 300 (15
20
100
100

4 If 60 dollars buy 20 yards of cloth how many yards will 15 dollars buy

dol yds dol
60 : 20 :: 15
15
300
60) 300 (5 yds Ans
300

*Here it may be observed that in all the above examples the first and third terms of each statement are of the same name and denomination and that the answer is of the same name with the second or middle term according to the Rule.

yds s yds
Thence 9 : 216 :: 69
69
648
1296
20
9) 13608 (1512 (75£ - 12
9 140
46 112
45 100
10 12
9
18
18

Here the answer comes in a low denomination viz shilling, which I reduce to a high denomination viz to pounds and shillings, which must always be done in like cases.

Continued

6. If 2s 9d will buy 9 yards of ribbon; how many yards will 15s 9d buy

2 9 : 9yd :: 15 9
12   12
27   189

27 : 9 :: 189
9
27)567(21yds Ans
54
27
27

In this example there being two denominations in the first and third terms I reduce them to the lowest mentioned viz to pence I then state the question and proceed as in the other examples

7. If 2 yards of cloth cost 12 dollars; what will [illegible]

[illegible]
24
6
384
[illegible] Ans

8. If 12 yards [illegible] what [illegible] yard cost

[illegible]
[illegible]

[illegible] 2 [illegible]

16

[illegible] 2 [illegible]

9. If £66 [illegible] yards of [illegible] £131 6 buy

[illegible] 14 :: 131 6
2
[illegible]
12
24 [illegible]
54
97 [illegible]
131 [illegible]
14 [illegible]
131 22 (9 yds

Continued

Note. When [illegible] federal money ~ [illegible] different denominations reduce them to the lowest [illegible] and proceed as in whole numbers. Note. When [illegible] federal money proceed as in whole numbers [illegible] est denomination that [illegible] you have [illegible] must be in the dollars and cents point off the two right hand figures of the quotient for cents the feft hand figures are dollars but if the middle term consists of cents and mills or dollars cents and mills or dollars point off the first right hand figure of the quotient for mills the two next for cents the remaining figures on the left hand are dollars

10 If one dollars 50 cents buy three yards of linen how many yards will 16 dollars buy

1,50 : yds [illegible] : cts [illegible]
16,00
[illegible]
1,50) [illegible] (32 yds Ans
[illegible]
[illegible]

11 If eight yards of cloth cost dol 16,98,4 what will 96 yds of the same cloth cost

yds dol cts m yds
8 : 16,98,4 :: 96
96
10190[illegible]
15285[illegible]
8)163046 4 (209,80,8
16
30
24
64
64
64
64

12 If 19 yds of cloth cost 39 dollars how many yds of the same may be bought for 156 dolars 52 yds

39 ; 19 :: 156
19
468
156
39)2028 (52 yds
195
68
68

A man bought 36 yards of cloth for 108 dols and sold the same at 4 dols per yard did he gain or lose and how much Gained [illegible]

yds D yds
1 : 4 :: 36
4
144
108
36 Gain

Continued

14 If 7 yards of ribbon cost 6/8 what will 42 yards cost at that rate

```
     6 – 8
       12
 7 :   80 :: 42
             80
       7)3360
       12)480
        2)40
        £2
```

15 A man bought [illegible] containing 25 yards [illegible] dollars [illegible] 37 dollars 50 cents [illegible] rate of 2 dollars 50 cents [illegible] how much? [illegible] Ans

```
 7
 25
  3
 ——
 75      1 : 2,50 :: 75      75
             75              50
           ————             37,50
           1250            ——————
           1750             18,75
           ————
           187,50
           168,50
           ————
           [illegible]
```

16 If a man earn 64 dollars in 4 months, how long must he work to earn [illegible]
19 months [illegible]

```
 64 : 4 :: [illegible]
 64)1216
     64
     576,19
     576
```

17 If an ounce of silver be worth 1 dollar 10 cents, what is the value of a silver tankard weighing [illegible]
$26,60 Ans

```
 1 : 1 : 10 : 24
 20
 20
         120
         110
         12
         12
  [illegible])13200
         6,60
```

Continued

18 If 8 3/4 yards cost 4 dollars 20 cents, what will 13 1/2 yards cost

Dolls [illegible] Ans

yds 8 3/4 : 4,20 :: 13 1/2
4
35 4

[illegible]

19 A owes B 798 dollars, but A not being worth so much money B agrees to take 80 cents on the dollar; what sum B receives for the whole debt? Dols 638,40 Ans

Dols D
1,80 :: 798
80
63840

20 A man owes £ 693, but is worth only £ 462, what must each creditor receive on the pound? 13s, 4d Ans

£ s £
693 : 20 :: 462
20
693) 9240 (13s - 4d
693
2310
2079
231
12
693) 2772 (4d
2772

21 If a third of six be three what will fourth of twenty be 7 1/2 Ans

3)6
2 : 3 :: 4)20
5
3
2)15
7 1/2

Continued

If 95 yards cost 23 dollars, 75 cents, 5 mills what will 1 a yard cost? 4 [illegible]

95 : 23-755 :: 1
2 4 5 5 0
95) [illegible] 0,450
1 30

If 3lb of Tobacco costs 37 cents 5 mills, what how much of the same may be bought for 10 dollars, 12 cents 5 mills? 25 [illegible] lbs

975 : 9 :: 9125
9
975)9975(25
750
1875
1875

A tub, wich holds 180 gallons, is supplied by a pipe which admits 16 gallons into it in 30 minutes; it also has a leak in the bottom wich lets out 10 gallons in the same time. Now if the water begin to come into the tub when it is empty, in what time will it be filled 10h 5m [illegible]

16
10
6 : 30 :: 180
30
6)5900
60)650
1050

Suppose my income be £.135-16 8 per year, how much may I spend per day inorder to lay up £.75 at the year end 3s 4d per day th

£ s d
135 : 16 - 8
75
Days 365 : 60 - 16 - 8 :: 1d
20
1216
12 12
365)1460 0(40
1460
3 4 Ans

Continued

A man bought 72 yards of cloth for 216 dollars and sold it in such a manner as gained 54 dollars; what did he give per yard and how did he sell it per yard

3 dollars given per yd
3 dollars 75 cents sold at

yds
72 : 216 :: 1 yd
72)216(3
216

216
54
72 : 270 :: 1 yd
72)270(3-75
216
540
504
360
360

Note

The above questions requires two different statements as is frequently the case, and sometimes a question requires three or more statements.

A man bought 27 yards of cloth for 86 dollars, 40 cents and sold it in such a manner as gained 20 dollars, 25 cts what did it cost per yd how did he sell it per yd and how much did he gain per yard

dolls 3.20 cost per yd
3 95 sold it per yds
0 75 gained per yd

yd
27 : 86-40 :: 1
27)86-40(3-20
81
54
54
0

dol cts
86-40
20-25
106-65 :: 1 yd
27)106-65(3-95
81
256
243
135
135

yd
27 :: 20-25 : 1 yd
27)20-25(0.75
189
135
135

Continued

If [illegible] Massachusetts money is equal [illegible] New York money, how much York money must [illegible] given for [illegible] Massachusetts [illegible]

6 : 8 :: 100
20
2000
8
6)16000
12)2666 8
133 6 8

If a staff which is [illegible] long [illegible] a shadow which measures 9 feet, how high is a [illegible] whose shadow at the same time measures 285 feet — 95 feet Ans

1 : 3 :: 285
3
9)855
95

A [illegible] has a leak, which will [illegible] it in [illegible] [illegible] it likewise has a [illegible] which will [illegible] it in [illegible] hours [illegible] they begin [illegible] [illegible] in what time will it [illegible]

From [illegible] h h h h m
Take [illegible] Remain 7 : 10 : 16 48 Ans
Rem [illegible] 5 : 7 :: 1
7
[illegible]
4
60

If 4/5 of a ship cost 12580 dollars, what is the [illegible] value — As 4 : 12580 :: 5 : 15725 dols Ans

12580
5

4)62900(15725
4
22
20
29
28
10
8
20
20
0

If a [illegible] cost 13595 dollars, which is 3/7 of [illegible] value, As 7 : 13595 :: 3 : 5826-42, 8 4/7 Ans

dol
13595
3

7)40785(5826-42-8 4/7
35
57
56
18
14
45
42
7)30(42-8 4/7
28
20
14
60
56
4

A man bought 3/16 of an acre of land for which he gave 84 dollars, what was the acre valued at, 448 dol

3 : 84 :: 16
84
64
128
3)1344
448

A man bought a barrel of rum containing [illegible] gallons at 6 shillings per gallon, but, by a leak in the cask, he lost 7 gallons. How must he sell what was saved per gallon, so as not to lose

1

gal s gal d 8 s Ans
1 : 6 :: 28
6
21 :: 168 : 1 gal
1
21) 168 / 8 s Ans

9)

6

A man bought 1 cwt of sugar, but after it was cut and found it weighed only [illegible], what did he lose per pound? 2 ounces Ans

lb
1600
1400 lb
1600 :: 200 : 1
1
200
16
1200
200
1600) 3200 (2 oz Ans

lb.

2d.

A gentleman bought 85 hogsheads of rum in the West Indies for 30 dollars per hogshead. The cost of transportation was 20 cents per hogshead. His own time he valued at 40 dollars, and his other expences were 60 dollars. Now I demand how he must sell the rum per hogshead in order to clear 850 dollars?

3d

Sol 41, 37, 6 Ans

1: 90 - 85
30
2550
17
40 own time
60 other escpence
~~pk~~ 850 pk
85: 3517 : 1
1
85)3517(41,37,6
340
117
85
85)3200(
255
650
595
550
510

85
20
1700

If I buy a barrel of cider containing 32 gallons for £. 14 and sell it at 4 pence per quart, do I gain or lose and how much? I gain 18s. 8d. Ans

qt d qts
1 : 4 :: 32
4
128
4
12)512
20)4-2-8
2-2-8
1-4
1 8 8

Suppose a tax of 879 dollars 45 cents be laid on a town and the value of all the estates in town amount to 175890 dollars; what must a man pay whose estate is valued at 896 dollars? doll 4,48 Ans

175890 : 87945 :: 896
896
527670
801505
703560
175890)78798720(4,48
703560
175890)8542720(4
703560
175890)1407120(8
1407120

Single Rule of Three Inverse or Indirect Proportion.

In the Single Rule of three Inverse, there are three numbers given to find a fourth which shall be in proportion to the second as the first is to the third

When more requires less or less requires more the question belongs to the Single Rule of Three Inverse

When more requires less, the third term is greater then the first; and then the fourth number or answer required must be less then the second or midle term

When less requires more the third term is less then the first; and then the fourth number or answer requiered must be greater than the first second or midle term

Rule. Having reduced the first and third term to one denomination and the second or midle term to the lowest denomination mentioned state the question as in the Single Rule of Three Direct then multyply the first and second term to gether and divide the product by the third term the quotient will be the answer

If 6 men do a piece of work in 18 day in what time will 12 me do it

6 :: 18 :: 12
6
12) 108 (9
108

If 12 men do a piece of work in 9 day how long will it take. 6 men to do the same work

$\overset{m}{12} :: \overset{d}{9} :: \overset{m}{6}$
12
6) 108 (18
6
48
48

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42

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